



# Data Taking Statistics

## Week of 2003 March 24-30

Date	Del	Normalizable Luminosity (pb <sup>-1</sup> )			Hours			Norm. Events (k)		Efficiency	
		Util	Rec	Physics	Store	Util	Rec	Rec	Physics	Rec	Phys
24-Mar-03	795.71	748.48	643.89	643.89	10.2	9.5	8.8	1263	1263	0.809	0.809
25-Mar-03	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0	0	0.000	0.000
26-Mar-03	1131.73	1076.59	941.72	892.92	18.9	17.7	17.3	2826	2659	0.832	0.789
27-Mar-03	273.47	266.32	234.86	234.86	5.1	5.0	4.8	716	716	0.859	0.859
28-Mar-03	303.00	285.81	241.65	241.65	7.7	7.2	6.6	927	927	0.798	0.798
29-Mar-03	869.19	861.54	786.18	786.18	12.2	12.1	11.8	1776	1776	0.904	0.904
30-Mar-03	328.07	323.35	287.95	287.95	7.5	7.4	7.1	956	956	0.878	0.878
	3701.2	3562.1	3136.3	3087.5	61.6	58.9	56.4	8464	8297	0.847	0.834

- Corrections to Physics Luminosity & Events to Tape
  - Special Runs: Muon Trigger Study
    - Recorded 49 nb<sup>-1</sup> & 167k of non-Physics events

	Recorded Physics Lumi	Efficiency	Physics Events (million)
This Week	3.1 pb <sup>-1</sup>	83.4%	8.3
Last Week	4.9 pb <sup>-1</sup>	81.4%	9.2
Best Week (2002 Dec 30-2003 Jan 5)	5.7 pb <sup>-1</sup>	83.1%	14.5



# Delivered Luminosity Losses

Major Sources of Downtime: Not recording during a store

24-Mar-03	11:46	0.30	SMT HDI Problems
28-Mar-03	7:04	0.43	PC20 Water Flow Sensor

## Other Losses

- ~1.0 hrs: SMT HDIs - several times during stores
  - Silicon device gets “stuck” and needs to be reinitialized or disabled
- ~0.5 hr: 30 Run transitions (~1 minute/per)
- ~0.5 hr: 9 Begin or End Store transitions (~3 minutes/per)
  - Improving downtime at the beginning and end of stores!
- ~2-3 hrs: Average 5% FEB during physics data taking



# Other D0 News

## Three Controlled Accesses

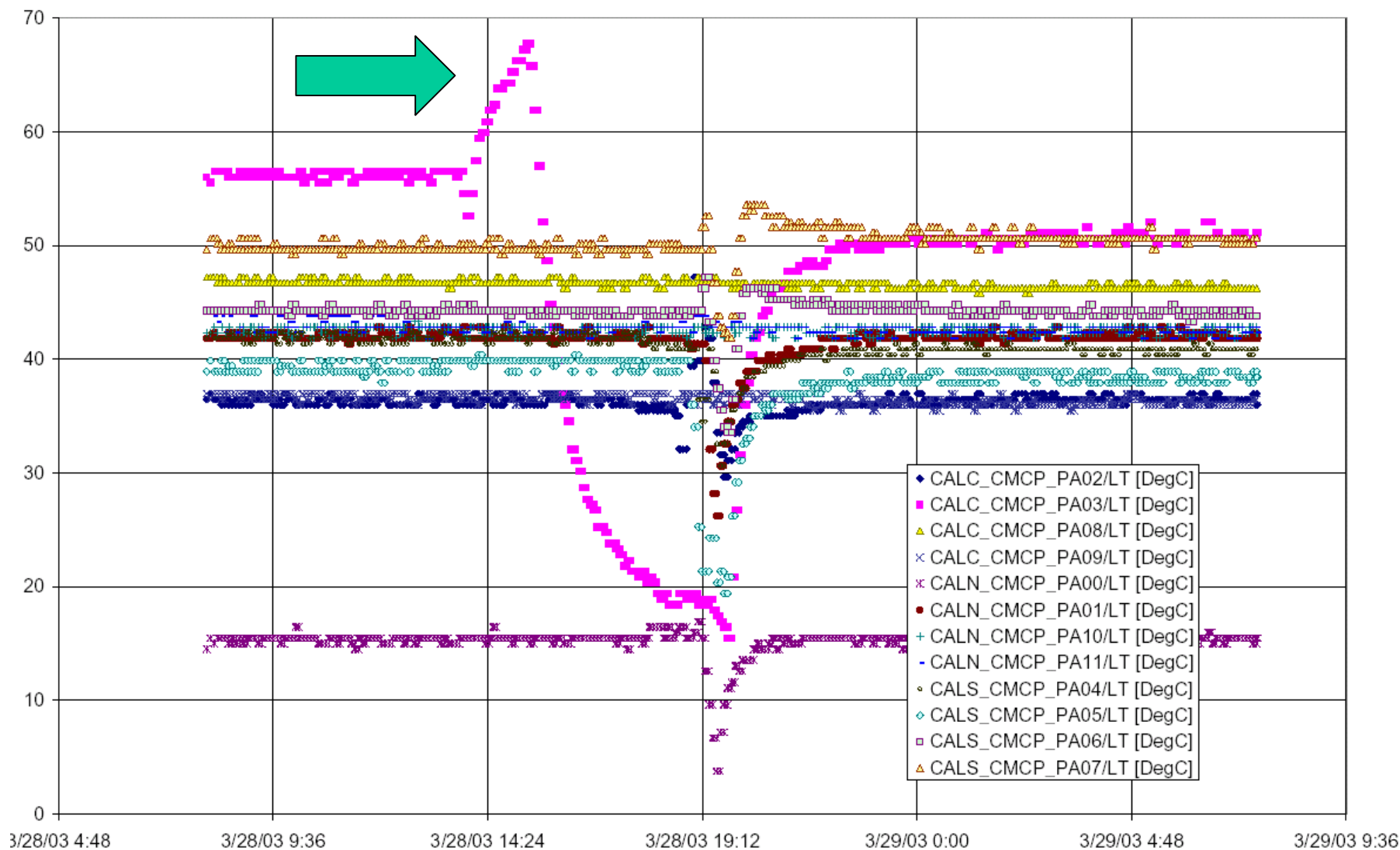
- 16:00-18:45 Mon Mar 24<sup>th</sup>
  - CFT, L1 Muon work
  - SMT Sequencer swap
- 21:30-22:30 Wed Mar 26<sup>th</sup>
  - Calorimeter BLS Board Swap
- 08:30-09:30 Fri Mar 28<sup>th</sup>
  - L1 CTT cable check
  - SMT Sequencer swap
  - Water Flow Sensor
    - Tripped power to Platform rack at 07:05. Power to half of the Silicon was lost.
      - Only affected ~30 min of data taking as store was lost at 07:35
    - Problem duplicated by tapping pipes - bad sensor was disabled. We have redundancy in that region.

## Supervised Access on Fri 16:00-23:00

- Calorimeter Preamp Fan Failure
  - Second fan failure in preamp box 3. Triggered major alarm limit just after 14:00
  - First one failed March 5<sup>th</sup>
    - High infant mortality?
  - Temperature rose from 58 C to nearly 70 C over a 20 minute period. Any higher, the klaxon would shut off the power.
    - Forced to power down
  - Requested pending shot setup be delayed as we did not want to run with a compromised Calorimeter over the weekend
    - Garbage data for any analysis dependent on EM and MET



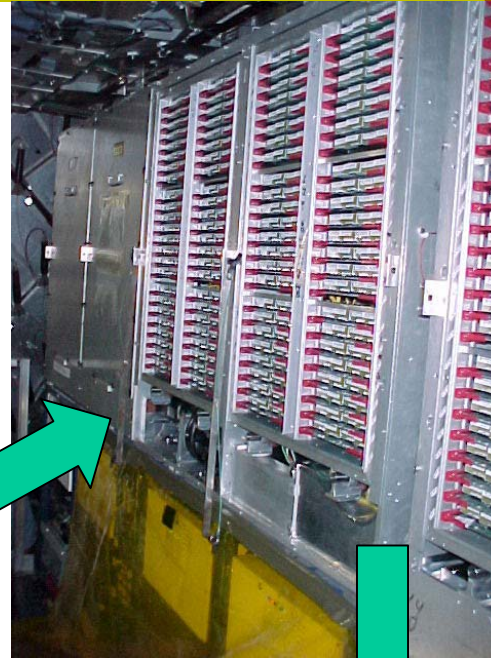
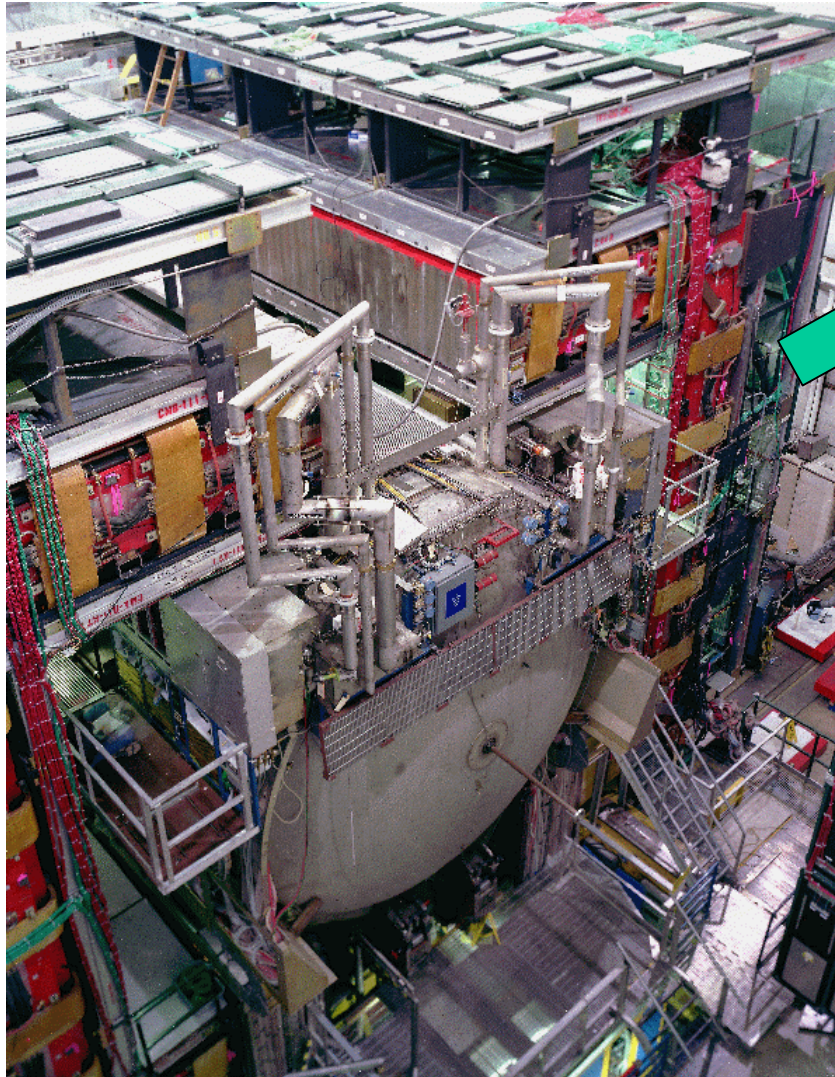
# Temperature Archiver



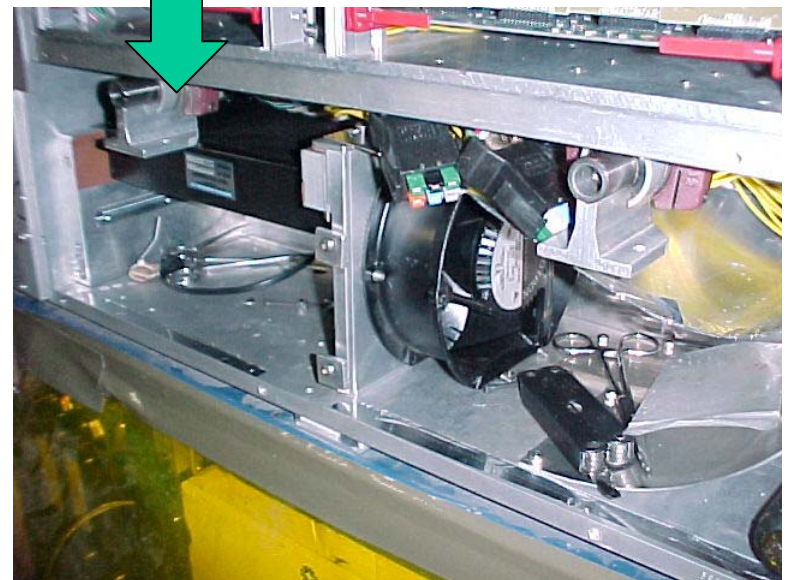




# Calorimeter Preamp Boxes



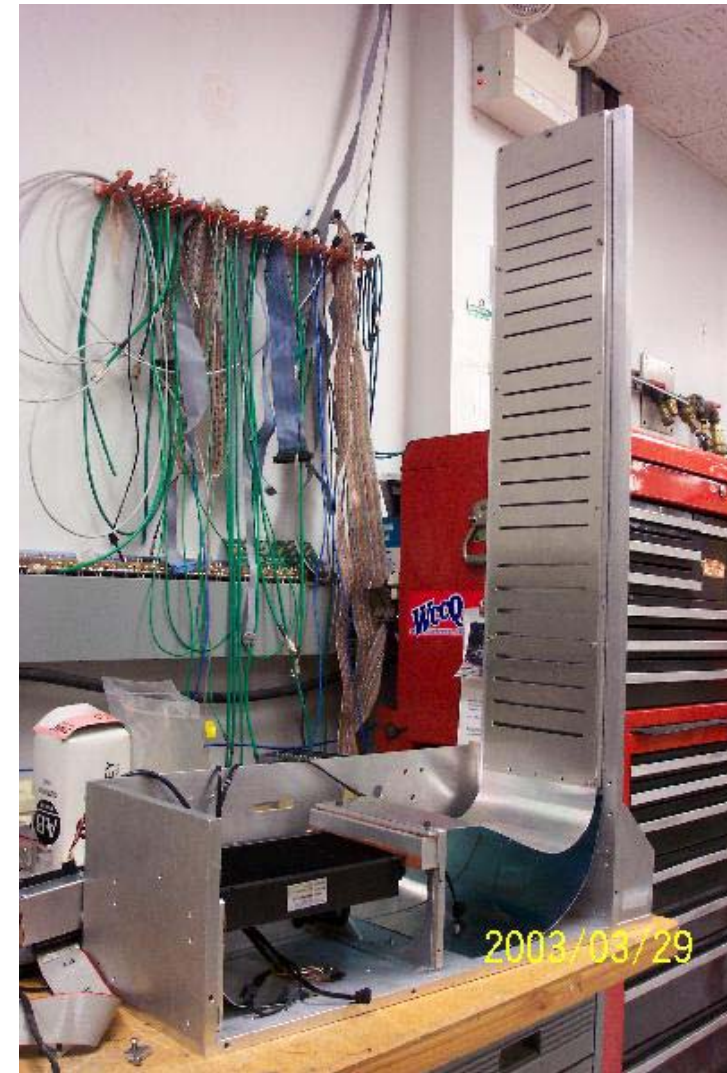
**Twelve  
preamp boxes  
each with 5k  
preamps  
cooled by heat  
exchanger  
and three fans**







# Calorimeter Preamp Fans



- SA began at 16:00. Opened detector by 18:15 to gain access to CAL West Preamp boxes.
- Fan replacement from through 21:45. While we were up there and open, a check was performed of all West preamp fans.
  - Found another dead fan in adjacent box!
- The detector was closed by 23:00, and Search & Secure began at 23:10.
  - Thanks to the hard work by DO engineers & technicians, many on the job for 16+ hours Friday!



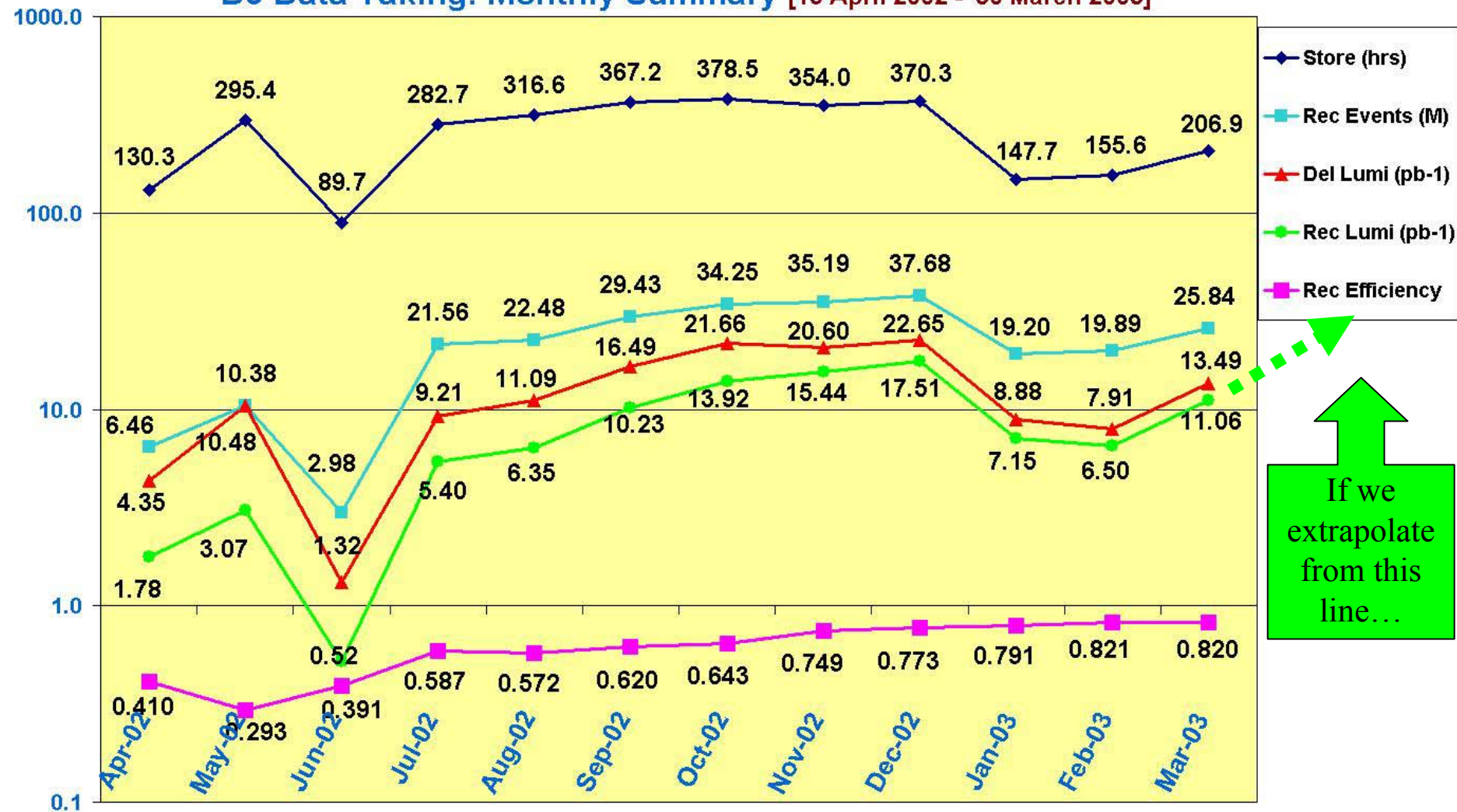
# Plans for Upcoming Week

- Will provide a follow-up on the Calorimeter Preamp Fan next week
  - Developing a longer term strategy
    - Better testing, monitoring, other?
  - Autopsy is not complete
    - Also still need to speak with manufacturer
- Need to resurvey the West & North EF in a timely fashion
  - Can do in separate jobs
    - 1-2 hours for WEF & 2-3 hours for NEF
- No major problems affecting physics data taking
  - Continue to utilize short controlled access opportunities
    - Tracking Trigger & FPD Commissioning
    - Infrequent minor Muon, SMT & Calorimeter electronic or hardware issues as well as second order improvements



# Monthly Data Taking Summary

D0 Data Taking: Monthly Summary [19 April 2002 - 30 March 2003]



If we extrapolate from this line...